

CLAIMS

1. A dental treatment device comprising:

a pre-shaped, non-custom dental tray suitable for placement over at least one of a person's upper or lower dental arches, wherein the dental tray is formed from a thermoplastic material and comprises:

at least two side walls defining a trough and having a substantially horseshoe-shaped configuration at least approximately corresponding to a person's dental arch,

wherein the at least two side walls have a thickness in a range of about 0.05 mm to about 1 mm and are flexible so that, when the non-custom dental tray is placed over a person's teeth, the tray can at least partially conform to the person's teeth during use; and

a quantity of a dental treatment composition loaded within the trough of the dental tray, the dental treatment composition being sufficiently viscous and sticky so that, when the dental tray is placed over a person's teeth, the dental treatment composition will hold and retain the dental tray over the person's teeth and cause the tray to at least partially conform to the person's teeth.

2. A dental treatment device as defined in claim 1, wherein the dental tray

includes a front side wall, a rear side wall, and a bottom wall interconnecting the front and rear side walls.

3. A dental treatment device as defined in claim 1, wherein an interior surface

of at least one wall of the dental tray is textured so as to include a plurality of indentations.

4. A dental treatment device as defined in claim 3, wherein the indentations comprise at least one of a taffeta texture, tiny dimples, or a diamond grid texture.
5. A dental treatment device as defined in claim 1, wherein the dental tray is sized and configured so as to fit over at least a portion of a person's upper dental arch.
6. A dental treatment device as defined in claim 1, wherein the dental tray is sized and configured so as to fit over at least a portion of a person's lower dental arch.
7. A dental treatment device as defined in claim 1, wherein the dental tray is formed from a mixture comprising ethylene vinyl acetate (EVA) and polypropylene (PP).
8. A dental treatment device as defined in claim 7, wherein the mixture comprises from about 10% to about 30% by weight PP, with the balance consisting essentially of EVA.
9. A dental treatment device as defined in claim 7, wherein the mixture comprises from about 15% to about 25% by weight PP, with the balance consisting essentially of EVA.
10. A dental treatment device as defined in claim 1, wherein the at two side walls of the dental tray have a thickness from about 0.075 mm to about 0.75 mm.

11. A dental treatment device as defined in claim 1, wherein the at two side walls of the dental tray have a thickness from about 0.1 mm to about 0.5 mm.
12. A dental treatment device as defined in claim 1, wherein one or more of the side walls are contoured to approximately correspond to the curvature of labial or buccal surfaces of a person's teeth.
13. A dental treatment device as defined in claim 1, wherein the dental tray is sized and configured so as to approximately terminate at or near a person's gingival margin when the dental tray is placed over the person's teeth.
14. A dental treatment device as defined in claim 1, wherein the dental treatment composition comprises at least one of an antimicrobial agent, a remineralizing agent, an anti-tartar, a desensitizing agent, or an anti-plaque agent.
15. A dental treatment device as defined in claim 1, wherein the dental treatment composition comprises at least one dental bleaching agent.
16. A dental treatment device as defined in claim 1, wherein the dental treatment composition comprises at least one thickening agent.
17. A dental treatment device as recited in claim 1, wherein the quantity of a dental treatment composition is loaded within the trough of the dental tray as a bead that rises about two-third the height of the dental tray.

18. A dental treatment device as recited in claim 1, wherein the dental treatment composition is such that it forms a dry skin on a surface thereof prior to use.
19. A dental treatment device as recited in claim 1, wherein the dental treatment device is contained within a sealed package prior to use in order to protect and increase the stability of the dental bleaching composition.
20. A method of treating a person's teeth comprising placing a treatment device according to claim 1 over at least a portion of a person's teeth for a desired time period.

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21. A dental bleaching device comprising:

a pre-shaped, non-custom dental tray suitable for placement over at least one of a person's upper or lower dental arches, wherein the dental tray is formed from a thermoplastic material and comprises:

at least two side walls defining a trough and having a substantially horseshoe-shaped configuration at least approximately corresponding to a person's dental arch,

wherein at least one of the two side walls has a textured inner surface,

wherein the at least two side walls have a thickness in a range of about 0.05 mm to about 1 mm and are flexible so that, when the non-custom dental tray is placed over a person's teeth, the tray can at least partially conform to the person's teeth during use; and

a quantity of a dental bleaching composition loaded within the trough of the dental tray, the dental bleaching composition being sufficiently viscous and sticky so that, when the dental tray is placed over a person's teeth, the dental treatment composition will hold and retain the dental tray over the person's teeth and cause the tray to at least partially conform to the person's teeth.

22. A dental bleaching device as defined in claim 20, wherein the at least two side walls have a thickness in a range of about 0.1 mm to about 0.5 mm.

23. A dental bleaching device as defined in claim 20, wherein one or more of the side walls are contoured to approximately correspond to the curvature of labial or buccal surfaces of a person's teeth.

24. A pre-shaped, non-custom dental tray suitable for placement over at least a portion of one of a person's upper or lower dental arches, wherein the dental tray is formed from a mixture comprising ethylene vinyl acetate (EVA) and polypropylene (PP), the dental tray further comprising:

at least two walls defining a hollow interior portion, wherein an interior surface of at least a portion of the at least two walls includes a plurality of indentations therein for holding a treatment composition against a person's teeth when the dental tray is in use; and

wherein the at least two walls have a thickness in a range of about 0.05 mm to about 1 mm and are flexible so that, when the non-custom dental tray is placed over a person's teeth, the tray can at least partially conform to the person's teeth during use.

25. A dental tray as defined in claim 24, wherein one or more of the side walls are contoured to approximately correspond to the curvature of labial or buccal surfaces of a person's teeth.

26. A dental tray as defined in claim 24, wherein an interior surface of at least one wall of the dental tray is textured so as to include a plurality of indentations.